Amendments to the Claims:

Please amend the claims to read as follows:

1. – 10. (Canceled)

11. (Previously presented) The network element of claim 19, wherein the service management channel includes a byte of a path overhead of an optical transmission frame.

12. (Previously presented) The network element of claim 19, wherein the service management channel includes a header in a Generic Framing Procedure client management frame.

13. (Previously presented) The network element of claim 19, wherein the message is one of a command message, a response to a command message, a service performance report message, and a priority code message.

14. (canceled)

15. (canceled)

16. (previously presented) The network element of claim 19, wherein the service is one of an asynchronous service, a synchronous service, a local area network service, a storage area network service, and a managed wavelength service.

17. (canceled)

18. (canceled)

19. (Previously presented) A network element connected at one end of a dedicated circuit used to carry customer traffic associated with a service, the network element comprising:

a client interface receiving client signals from a client network;

a service management channel entity deriving from the client signals service-specific information related to a performance of the service and generating a message in response to the service performance information, the message identifying the service to which the service performance information in the message pertains; and

a transport interface for mapping and adapting the client signals to an optical transport facility, the transport interface transmitting the message to a network element at the other end of the dedicated circuit over a service management channel capable of carrying the message across a network-to-network interface.

20. (canceled)

21. (Previously presented) The network element of claim 11, wherein the optical transmission frame is a Synchronous Optical Network (SONET) frame and the byte of the path overhead is a Z3 byte.

22. (Previously presented) The network element of claim 11, wherein the path overhead byte has bits for conveying a status of the service and bits for conveying the message.

23. (Previously presented) The network element of claim 22, wherein the path overhead byte further comprises bits for conveying commands and responses.

24. (Previously presented) The network element of claim 12, wherein the header includes a payload type indicator (PTI) field and a user payload

indicator (UPI) field, and wherein the header indicates that the Generic Framing Procedure client management frame contains the message when the PTI and UPI fields contain certain predefined values.

25. (Canceled)